

A Beginners Guide To Bricklaying



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Introduction

A short history of bricklaying

It was in the seventeenth century that we witnessed huge developments in the craft of bricklaying in England due in part to the introduction of the Dutch fashions under William III and Mary II. The famous architect Sir Christopher Wren plumped for many features in his designs and none more so than 'gauged' brickwork. This very fine brickwork called for a high degree of craftsmanship and knowledge of geometric patterns of work and it can still be seen in many of the old buildings in Europe and the UK.



St. Pauls Cathedral

The craftsmen of the day were allowed free range to produce decorative designs and mouldings all for the, often personal, quest to decorate buildings. London, and in particular its museums, had their fascia's decorated with ornamental carvings cut directly into the soft red bricks; a skill that has sadly moved on due to cost and availability of the skill levels of builders today.



After previous designers had discovered the need to bond brickwork together to maintain maximum strength, architects became influenced by the Flemish approach to building and began to break up large areas of walling with highly decorative patterns known as 'diaper bond' and 'garden wall bonds'.

It could be said that during this period the bricklayer became a skilled artisan and it is not difficult to see examples which back up the argument that the craft of brickwork is indeed steeped in history. The thirteenth century saw a major increase in the use of brick for dwellings in England. It's possible for instance, to track back in time to the invasion of Britain by the Romans to witness the desire to replace the Saxon style of using almost any material which came to hand to build a home. Perhaps the most noticeable change in house and building design arrived as a result of the great fire of London. At the end of a long dry summer in 1666 a fire broke out in London's Pudding Lane and for 3 days it raged across 400 acres of tightly packed timber framed buildings. Only the River Thames halted the progress of the fire to the south. In an effort to halt the disaster, buildings in the path of the fire were destroyed using gun powder. With damage of around £7,000,000, in a century when the magnificent Banqueting House in London cost only £15,000 to build, this indeed proved to be a drastic turn of events. In February 1667, the first rebuilding act was passed and from then on bricks and stone were required by law for use in the front and rear walls. Further back during the middle ages, brickwork had been in constant use in a wide range of locations.

At the beginning of the 19th century mechanical brick-making processes began to be patented and by the latter half of the century had almost entirely replaced the ancient hand-fashioning methods. Contemporary American building bricks for instance took on a standard rectangular block shape with the dimensions of about 2 1/4 by 3 3/4 by 8 in. (5.7 by 9.5 by 20.3 cm) becoming common. A suitable brick today must be resistant to atmospheric action and be able to withstand high temperatures and, in some cases, they must be more durable than stone. Specific bricks have even been developed to accommodate high heat resistance in industrial situations. Called refractory bricks, the inside of many industrial boilers are lined with these special bricks but, sadly, with technology moving on this is a dying craft. The devastating results of two world wars in Europe created a desperate need for housing. Fortunately, numerous clay pits and quarries had been located and brick manufacture was becoming fully mechanised. The ability to produce large quantities of building materials strengthened even more the need for brick. During the 60's sadly, the need declined as the move to provide housing for large amounts of people increased. Architects took to the skies and many city skylines became cluttered with huge high-rise tower blocks.

Leaving little space for the craft artisan, brick dwellings became the focus of the middle and upper class once again. However, like every good story there is a good element. Traditional features survived and the use of wood, brick and stone continued to be the domain of the more discerning client.

The art of craft building has not been destroyed; however, the cost of providing them has become an issue. Today it is more difficult to find a builder with the skill and experience of how to provide for a client group who have their own ideas as to what they should incorporate in their homes. Today if one visits a technical college providing craft training, one will find a situation where the amount of training, depth and complexity have declined and this is a sign of financial pressure of building in general. One thing is for sure though, while the desire to recreate stylist features from the past continues, the need for specialist crafts people will continue.

Chapter 1

Bricklaying tools

Unlike some building crafts, the bricklayer does not need to own a large number of tools in order to carry a range of tasks; considerations on the other hand lies more toward the quality of tool instead. Other factors come into play when you assess just how much bricklaying is to be carried out over a period of time; why buy a set of top-quality golf clubs if one day a week is your target? While tools need to robust, if a single project is to be undertaken it may be prudent to purchase a 'middle of the road' items instead of a professional outfit. It's similar to photography in a way. You can take a good picture on a medium priced camera but if you planned to take it up full time then a top of the range model would be a better bet. It must be said that cheap tools are not only an unsound financial investment they can be unsafe. Blades on trowels can become unstable if fully loaded and spirit levels can offer false readings with only the smallest knock.

When working with any tool you should remember that each tool should only be used for the job in hand; the reasons being that due to the uncertainty of their durability and reliability you may be faced with safety quality issue.

It's true to say that you get what you pay for when it comes to any tool but it can help build your confidence if you know you are using industry standard equipment. Taking trip to your local DIY / hardware store or builder merchants will give you a selection to pick from. One thing to remember is that once you have used them it's extremely difficult to return for a refund if they don't 'fit the bill'. So, let's take a look at the typical tools to be found in a bricklayer tool kit!

The Brick Trowel. This is the 'main stay' of any bricklaying operation is the large brick trowel. These trowels come in a range of sizes from around 9 to 13 inches and the length is measured along the underside of the blade. So which one? The choice is determined by your ability to control it.



Obviously the larger the trowel the more mortar you will be able to lift and place. For the person new to bricklaying the best bet is to go for the smaller version; in time you can always progress upwards. Look for a trowel which has a welded joint where the handle meets the blade, it is best not to go for a version which has been riveted at that point.

In general, a riveted joint will become loose in a short period of time due in part to tapping bricks into place.

Now trust me on this, there are left and right-handed trowel.... yes, yes I here you say, just like a left-handed screwdriver.

Well it's true and it's all to do with the shape of both sides of the trowel. One side is straight and is used to cut off excess mortar after laying the brick, the edge has a rounded edge which can be used for trimming bricks down to side. Left and right-handed trowels have these edges reversed.

Small Pointing Trowels. When bricks have been laid in place this trowel will be useful for finishing mortar joints. Ranging in size from 3- 6 inches they may also be useful for small tasks where it is not possible to spread mortar using the main trowel.

Again, look for quality in its construction. As this trowel is not used very often it is advisable to run a thin layer of oil over the blade to stop any rusting effects.



Club Hammer. This hammer may be referred to as a 'lump' hammer. It's basically a heavy hammer up to 1 pound in weight which is used in conjunction with a bolster and or cold chisel. It has a range of other uses where it is necessary to knock things down or smaller demolition jobs. Be sure to check out how solid the head is fixed to the handle and make sure no grease or oil comes in contact with the hammer face.

Bolster Chisel. This is a wide bladed chisel which used in conjunction with the club hammer and its main use is for cutting bricks to length. It is important to avoid using a bolster chisel for cutting into concrete or similar tasks however, if this is unavoidable it is



better to purchase two chisels and keep one solely for cutting bricks.

The blade can be sharpened on a grade 10 stone and it's advisable to maintain the edge after a period of prolonged use.

Look out for version which has a rubber ring some way down the handle as this can help protect hands and fingers if you slip with the lump hammer.

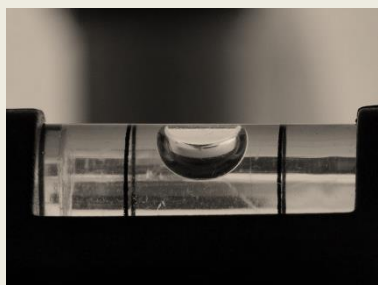
Brick Hammer. This hammer is extremely useful due to having two different heads. One head is in the form of a square flat face, useful for hammering in nails etc, and the other has a sharp wide blade which is used for chopping areas of brick when create a shape in a brick.



These hammers may come with a removable blade in place of the sharp end; remember that they should be used with care as it is all too easy to cut a hand or other body part.

Spirit Level. Perhaps next to the brick trowel this is the most obvious tool needed. Ranging from 9 inches to up to 6 foot, some even come with an adjustable bubble to allow for setting walls at an angle.

Buy the best you can afford. With this tool you need to feel sure that the vertical and horizontal readings are accurate.



Look for the option to have the bubbles adjusted by the company who made the tool if you are planning to undertake a larger number of projects.

Care needs to be taken when using a level, avoid the temptation to hit it with a hammer or a trowel when trying to adjust the upright or level of the bricks.

A water-proof tape measure. The sliding cassette rule has become the most common form of measuring tool used today. Used for as many areas as you can think of, it has only a short list of requirements. It has to be long enough for the task in hand and it has to be accurate; if these two factors are met the off you go; look out for a version which has a belt clip.

Stiff Hand Brush. On completion of brickwork it very often necessary give the walling a light brush. Again, try to keep the brush for this purpose only; after all you wouldn't use the same brush to do the dishes as you would brush your hair. Make sure the bristles are smooth as brick joints can be destroyed by pressing too hard. Brick Jointing Tool or Jointing Iron.

A brick jointer. is used mostly to create a half round joint between all joints in a wall. Generally, they are a long piece of steel rod which with a raised end to stop rubbing of fingers against the wall. By rubbing them into the semi wet mortar it creates a compacted and strong joint as well as a pleasing finish.

It has been known for some trades people to use an odd piece of rubber hose, be careful if you take this choice as the rubber wears down quickly and the brickwork joints become varied.

Small Hawk for Pointing. A hawk is a small square of wood with a handle underneath. It's used to holding small amounts of mortar and is used when re-pointing brickwork. It enables the user to carry mortar when working from a ladder etc. Many people make a version for themselves.

Hard Carpenter Type Pencil. Given that it is necessary to draw lines on brick occasionally it is of little use to use a pencil which is used for line drawing on paper. Look for a broad tip thick charcoal lead; it maybe that variations are to found in differing countries.

Builder Square. On many occasions you will need to ensure that your walling is square at the corners. It is possible to construct a simply square from timber but it may be more sensible to purchase one from your builders' store. Take care of this tool as you will be relying on its accuracy each time you use it.

Cold Chisel. A cold chisel is simply a long (6-12 inches) used for cutting out old bricks, making holes and all sorts of hand tasks.

Line & Pins. Best ask your local store for a set of bricklaying line and pins as they will show the best choice. These items are to be used when you need to build long lengths of walling.

By fixing the line at each end of the corners they are raised to offer a guide to each line of brick laid; normally referred to as the courses of brickwork. Make sure that the lines are wound onto the pins in a way which avoids knots etc and take care not to cut the line with a brick trowel.

Safety Goggles. I am not sure these needs explaining however, their use maybe a different subject. When cutting bricks, it is essential that safety goggles be used. If the projects you are working on are outside and you have a strong wind be prepared to wear these each time they are needed.

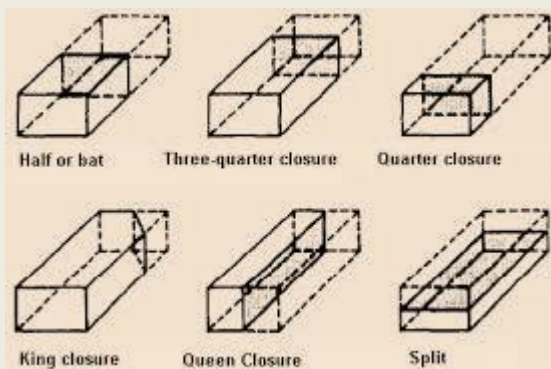
On some occasions it may be advisable to use but you may find it difficult to lay bricks with this kind of hand protection.

This list is a starting point to take to the store and seek advice. Above all, use your judgment when looking at quality and costing.

Chapter 2

Brick Cut Shapes

Bricks today are available in a range of colours and textures but one thing seems to stay the same, that of the size. Brick sizes for a long time in the UK were measured under the old-style imperial system of inches. During the changes to measurement in Europe all things changed and bricks became a standard size. In most part a standard brick face is 65mm deep, 215 mm long and 102.5 mm wide. It's possible to purchase bricks of varying density for projects which require less or more strength in their materials. Some bricks have a decorative face on 3 sides only and thus are limited in their use while the more expensive type have the same colour throughout all faces. Most projects that you undertake will require you to cut bricks into a variety of lengths. Most commonly, bricks cut into $\frac{1}{2}$ and $\frac{3}{4}$ lengths are easy to produce and are perhaps the most common size you will need. However, as you move on to something of a more decorative nature you may well come across some of the following shapes.



At first glance you could say “what would I need all of those for?”. It's all to do with ‘bonding’ the pattern of bricks together in way which eliminate the possibility of having one joint directly above another; the professionals refer to this as ‘having a straight joint’. The effects of ‘straight joints’ are to serve only to weaken a wall. Think about when you first drew the front of a house. I bet you drew straight lines across the page to show different rows of brick and then you naturally alternated the joints between each brick. So, in essence the reason bricks are cut into different lengths and shapes are to help ‘bond’ the bricks together with creating a straight joint; if these subjects grab you I suggest you look out for my next book. 😊

It is possible to purchase a range of pre-shaped bricks from specialist manufactures. Wonderful names such 'plinth, bullnose, squint and cant are among those on offer. These pre-fabricated shapes are expensive and are to be used on occasions when it's difficult to cut the shape required and you need to see the same finish to the brick face from all angles. Again' take a look at the text books on bricklaying to see examples of their use. Cutting should always be done using a club hammer and bolster chisel. Hold the chisel directly on the cut line' give a swift blow onto the chisel. The more tapping that takes place the more the chisel will move around and the cut will not be straight. Best to wear your safety goggles for this task as you can never be sure when the odd piece will 'fly off'. bricks are replaceable but you only get one set of eyes. Finally, take time to practice cutting different lengths on some old bricks maybe. Make $\frac{3}{4}$ cuts and then $\frac{1}{2}$ cuts on the same brick before trying for the final version. 'Remember to use safety goggles when cutting bricks'

Chapter 3

Mortar Mixes

Before we look at all the 'messy' parts of sticking bricks together let's decide what makes a good mortar mix. In order to keep our bricks together (or keep them apart?) most people run to the store and purchase a bag of cement. Good start however, we need more. Mixing washed 'building sand' (i.e. not from the beach), 'cement' and something like 'lime' will give an easy to use mix which is referred to as mortar. Some people are confused and refer to this mix as concrete, well concrete is a much courser mix made up of special cements and sand with small to large stones within it (i.e. aggregates). A useable mortar mix then is a mixture of washed building sand, a form of plasticiser such as lime and cement. Not mentioned before is the plasticiser. This could be a liquid additive or a percentage of building lime. Mortar mixes without a plasticiser can be difficult to manipulate, pick up and spread; so, let's assume we would like an easy to use mix. Mortar mixes can vary in proportions and therefore in strength. In general, the strength of a mortar mix should match the strength of brick used; i.e. the stronger the brick the richer in cement should be the mix.

A typical mortar mix should be in the proportions of part cement, 1-part lime and 5 or 6 parts sand. If a strong mortar mix is used with a weaker strength brick then you can expect to see shrinkage and cracks as the mortar mix dry out at a different rate to the bricks; the rule then is to match strength of each. The chart below offers a general guide to a range of mortar mixes.

Type of walling	Cement	Soft sand	Lime or plasticiser	Sharp sand
Brick house	1	5	2	0
Block walls	1	5	1	0
Retaining walls	1	3	2	1
Block retaining	1	3	1	1
Coping's	1	2	½	2
Chimneys	1	5	2	0
Chimney pots	1	0	1	4
Paving joints	1	3	0	0
Laying paving slabs	1	0	0	6
Re-pointing	1	3	2	0
Floor screed	1	0	0	4
External render	2	3 ½	1	3 ½
External render 2 nd coat	2	4 ½	2	4 ½
High density bricks	1	3	0	0

If this is all too much you could always purchase a pre-mixed dry bay from the merchant; remember however, that these bays are expensive and they don't go far.

If separate ingredients are to be used the proportions should be measured by volume. Use a simple thing such as a dry bucket or similar but remember that for each measure you should fill the container to the same level. Find a clean outside area such as some old paving or better a large piece of timber boarding. It is vital that all the ingredients are mixed together in a dry format first. Be extra careful to make sure the cement is not blown away by strong winds. When mixed dry create a large mound and scoop out the centre to create a space for the water. Now it is not necessary to measure out an amount of clean water before mixing as the amount needed will depend on the porosity of the ingredients. Add the water slowly to the mix and turn over with a clean shovel. When to stop mixing? Well you will know, just make sure that you do not over do the amount of water as this will weaken the mix. Important to remember that the proportions of the mortar must stay the same if you are looking for consistency in strength and colour when dry; how much you mix is of course determined by the size of the project and only practice will help here.

You can of course use a cement mixer with the same proportions. In this case add the mixture in dry form first then slowly add the water being careful that the cement is mixed thoroughly. Remember before you go down this route you will be mixing large amounts of mortar. Remember also that mixers must be clean thoroughly after use.

Let's get mixing



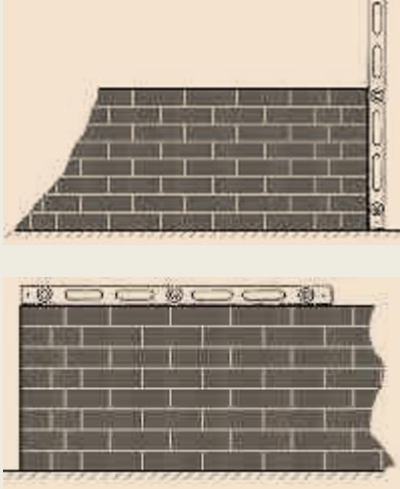
Chapter 4

Plumbing, Levelling & Gauging

I want you to think solely for a moment as a consumer. When you check out an item for sale or consider an expensive piece of clothing or take a new PC for a test drive, you are guided to some extent by the visual appearance. If the finish is poor, you form an opinion quickly as to the quality of the item and the same applies to a finished piece of brickwork. Brick walling will appear to be of poor quality if it is not straight, up right or even out of line and poor workmanship has to be the main reason for making a judgment. Brickwork then has a set of guidelines on which quality can be measured. For your brickwork project to pass the quality test it needs to be:

- Upright or vertical
- Level or horizontal over the full length of the walling
- Be in line across the diagonals i.e. from corner to corner

These elements are achieved by paying attention to Plumbing, Levelling and Gauging, so let's look at each in turn.

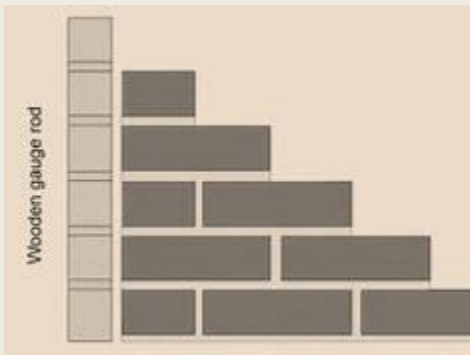


The picture above shows the two most common areas which should have your attention. Plumbing When bricks are laid there has to be a guide to keeping the walling upright. By using a spirit level as shown in the bottom drawing above, one is said to be levelling the wall. This is extremely important when building the first section of walling. The drawing above shows a spirit being used at the end of a wall. Each time a row of bricks (known as a course) are laid it becomes necessary to straighten things up. By placing the spirit level against the 2 sides of the end you are able adjust the amount they lean in or lean out.

By placing your foot at the bottom of the level it is possible to tap the bricks in or pull them out; this motion is necessary after laying each course of bricks. You should aim toward the corners of your new first as this is where all the measuring plumbing and levelling takes place. Take care that the face of the level is kept clean from any mortar as it may rub off onto the face of your bricks. Levelling As you would expect, if walling is not kept straight along the of the courses then it quickly becomes unsightly and difficult to manage. Using a spirit level on top of the bricks is known as levelling and again it is best done at the ends of the wall. After laying a number of brick (usually not more than the length of your level) you should tap the tops of each brick until they are in contact with the underside of the level. Again, avoid tapping the spirit level with a hammer or your trowel as damage caused will render the level to give false readings. Gauging In order for walls to be level it is necessary to keep the distance between each mortar bed the same; this is known as gauging. In the diagram above

You can see from the following picture the end on a section of walling. To the left is the brickwork while on the right you can see a long length of timber with divisions cut into it. Generally, the divisions are equal to the height of the brick + the joint.

When using bricks of metric sizing you will find that a joint of 10mm is normal. Now consider that the depth of a brick is 65mm it follows that the cut line on your gauge rod should be 75mm. By using a gauge rod, it will help to keep each ends of the walling to the same height

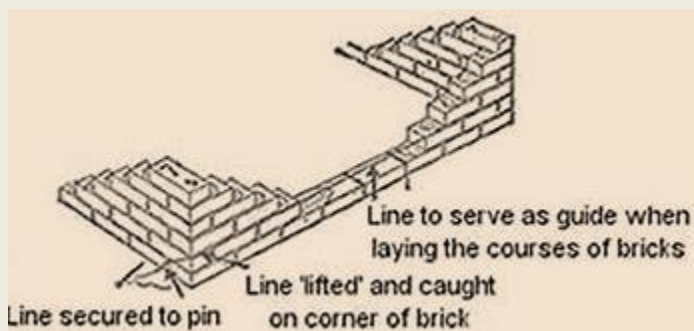


Once experience in bricklaying has been achieved, a gauge rod is no longer required but always keep your tape measure handy.

Chapter 5

Setting-out a Basic Wall

Starting a long length of walling: let's imagine that we need to build a length of walling; say 10/12-foot-long or similar to the drawing below. After the foundation has been created and the lines for the wall decided it will be advantageous place some dry bricks along the length in order to see how things will work out; this is known as 'dry bonding' and the purpose is to help avoid and unnecessary brick cuts in the middle of the wall.



Ok, so you have worked out that a full amount of bricks will fit into the proposed length so let's get laying. A number of techniques can be applied before you begin to lay bricks which will greatly increase the chances of producing a 'quality product' and they start with handling the mortar. In the sketch below, you can see that the mortar has been placed on a small wooden board; this helps in handling and also picking up etc.



You can see that a trowel full of mortar has been pulled to the front of the board; this is known as 'rolling the mortar'. Taking a trowel full at a time spread some out along the line of walling starting from the corners. Sufficient mortar should be spread to lay 3 or 4 bricks; use your level and gauge rod to line things up.

Going back to the drawing showing the layout of a brick wall you can see that a building line has been fastened between the corners and this now becomes your guide to help keep all brick in line. Use the line to match each top edge of the bricks Lift the line for each course until the wall is at the require height. When the walling returns around a 90°angle you will need to use the building square. After placing the bricks, you can either place the square into the internal angle or place directly on top of the bricks.

Chapter 6

Brickwork Bonding

For brickwork to be effective, thought needs to be given to the pattern in which the bricks are placed. How bricks are 'lapped' over each other is referred to as 'bonding'. The primary purpose of bonding is to ensure strength in a wall because it helps to spread loads over a wider area however, you also have choices as to the pattern of the bricks in your wall. As it is not good practice to have each joint immediately above each other it becomes necessary to lap bricks by $\frac{1}{2}$ or $\frac{1}{4}$, in other words, 'half bond' or 'quarter bond'.

Now I am sure that all that read this are aware of a simple process of lapping each brick in a 'half bond' fashion however, when you wish to increase the thickness of the wall it is possible to introduce one of the following bonds.

Bricklaying crews rely on various patterns, or bonds, when setting bricks. The type of brick bond chosen can impact everything from the appearance and a wall or other structure to its strength and durability over time. Different types of brick bonds are determined based on which side of the brick is positioned towards the outside of the structure, as well as how the bricks are placed in relation to one another.

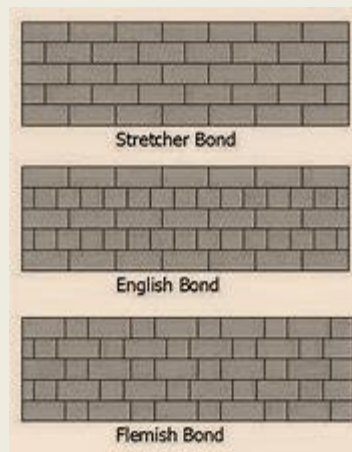
The three main types of brick bonds include **English, Flemish, and stretcher**, though many variations of these patterns can also be used when laying brick.

To understand different types of brick bonds, it is helpful to understand the name used to describe different brick positions. For example, a brick placed so that its large face is parallel to the ground, and its longest side facing out is known as a stretcher. When the stretcher is turned so that it sits perpendicular to the ground, it is called a soldier. If the short end of the brick is placed parallel to the ground and facing out, it is called a header. Headers turned perpendicular to the ground are known as rowlocks.

English, or Old English patterns represent the oldest and strongest type of brick bonds. This pattern consists of alternating rows of stretchers and headers, so that a full horizontal row of stretchers is sandwiched between full rows of headers. English bonds are very durable because the brick joints are unlikely to overlap. This bond pattern is also considered visually appealing, though less so than some newer bond designs.

Flemish brick bonds date back to the Tudor period in England, when masons were looking for a more attractive alternative to traditional English bonds.

In a Flemish bond, masons' alternate stretchers and headers within the same row, and each row follows a similar pattern. This bond is not as strong or durable as English bond, but is considered much more decorative.



The majority of modern structures were built using a running, or stretcher bond pattern. With this design, stretchers are placed end to end along the length of a row. The stretchers above and below this row are staggered to prevent the joints from lining up. Stretcher patterns are quick and easy to build, and thus less expensive than other brick bonds. At the same time,

they are also less durable and offer much less decorative appeal.

Any of these brick bonds can be modified using special masonry techniques. With diapering patterns, masons use different coloured bricks to emphasize the patterns in traditional English or Flemish bonds. A single course brick bond that differs from the rest of the structure is known as a stringer, while a unique brick pattern used at the top of a wall is known as a cornice.

Looking back through this book at the section covering brick cuts you can see a variety of cut shapes, some of which would be relevant at this stage. A simple $\frac{1}{2}$ cut is referred to as a 'half bat' while a brick cut along its length is known as a $\frac{1}{4}$ closer or 'queen closer'. Take a look at the patterns above and you will see that a 'half bat' is not used but instead a $\frac{1}{4}$ closer comes into play on the left-hand side of the drawings. Placing bricks in this fashion allows for a double strength wall as the depth of the wall is a full brick.

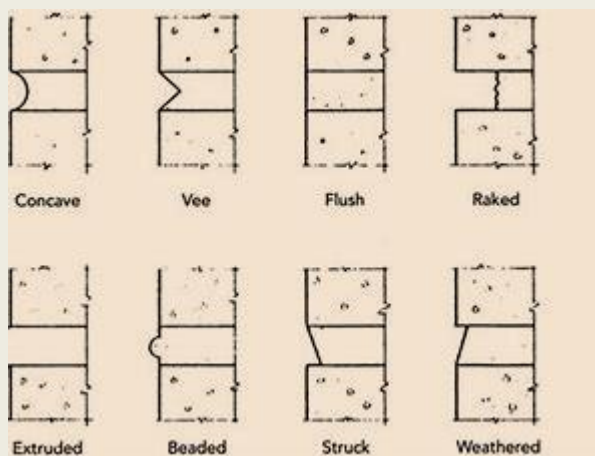
Now the above brick bonds are only the starting point, to show you more would take us past the remit of this book; if the interest takes you I would suggest looking at a technical building book in your local store.

In all cases care needs to be taken in trying to maintain a 10mm joint between the bed joints and the cross joints; any more than this and you run the risk of you walling becoming unsightly.

Chapter 7

Pointing & Finishing up

When a wall has been built and before the mortar hardens the bricklayer needs to 'finish off' the joints; this is done for two reasons. The first is to provide a decorative finish to the walling while at the same time ensuring that any gaps between the joints are filled. The second reason is more to do with adding strength to the joints as very often it involves compressing the mortar with a tool. So, finishing off the joints is referred to as 'pointing & or jointing'. You have a choice on how to finish the joints. The sketch below shows 8 different finishes that can be easily applied.



Figures' show a 'flush' finish. As the name suggests the mortar would become totally flush with the face of the bricks. This type of finish is very useful if you plan to use a different colour joint finish to the mortar. It's worth using this method for a large area of brickwork as mixing a separate colour mortar is expensive. In practice the joints would be left back from the face of the wall or they would have a small amount of mortar removed before setting to allow for the insertion of a new mortar mix. Mortar can be colour changed by purchasing a separate bag of pre-prepared coloured mortar or by mixing separately. Various colours are available however, check out your supply before you start building. Use the small trowel from your kit to re-fill the joints starting with all upright joints first. Its best to mix the mortar without too much water as care needs to be taken to avoid staining the bricks. Also shown is a 'Re-pointed' finish. In some cases, old brickwork joints become loose and brittle and the mortar face falls away after being exposed to 'heavy' weather over a long period of time. This type of finish normally involves cleaning away all remaining joints between to expose a depth of around ½ inch. When a new stronger mortar mix is prepared the walling is dampened down to help adhesion.

Again, using a small trowel, the mortar is placed in the joints and a slightly angled finish is applied.

This method is best used in areas where the brickwork will be subject to 'excessive' weather conditions and therefore it generally does not apply to newly built walling.

Another shows a 'Vee' finish. This approach involves using the edge of a piece of straight timber and pressing the edge into the mortar at an angle. The joints should look close to 45° inverted angle. This is a highly decorative finish which is best used for internal joints. Care needs to be taken to change the timber edge used regularly as wear tacks place on the timber quickly; the effect being a wider 'vee' than was planned. another shows a 'Half-round' finish. A very common finish to brickwork joints and is produced by using a piece of half round steel of a purpose made ½ round jointing tool.



Starting with all the upright joints before completing the long 'bed' joints it is simply applied to the mortar used to lay the bricks as the work proceeds. It is important not to apply the finish too soon after laying the bricks as staining may take place. It is better to complete a large section of walling before finishing the joints.

Finishing Off. With all the above methods you are advised to brush over the finished work before the mortar completely hardened. Timing is critical and you need to practice to avoid smudging the face of your brickwork. Remember to keep your small brush for this purpose only. Finished brickwork is referred to as 'face work' and it's like any other finished article, it needs to be protected. If brickwork is done badly it can be a waste of money, it can look unsightly and it can devalue a home.

Don't be afraid to practice brickwork first before taking on a project which is expected to have a decorative effect. Make sure to keep all areas clean as possible when working as it can affect the finish of your brickwork. Above all practice the following:

- Cutting off excess mortar as you lay brick will help keep all edges clean. Keep your trowel at an angle facing outwards and cut forward allowing the excess mortar to stay on your trowel. The excess then needs to be placed back with the main pile of mortar and not thrown away.
- Plan your building out well. Leave space from the face of the wall for safety as well as helping to keep things clean.
- If a special shaped brick is used offer some protection to the exposed edges e.g. cover over with some plastic sheeting or similar.

If you are working outside in a cold climate (i.e. an area which is prone to frost or snow), do not lay bricks if things are freezing.

Cover all newly built brickwork with a 'sacking' type material to keep out frost while the mortar sets.

- Clean all tools at the end of each session to avoid having to spend a long time cleaning off hard deposits of cement etc.